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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,580	09/04/2003	Yoshiaki Tanaka	10844-33US (203061 (C-3))	7843
570	7590	02/17/2005	EXAMINER VORTMAN, ANATOLY	
AKIN GUMP STRAUSS HAUER & FELD L.L.P. ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103-7013			ART UNIT 2835	PAPER NUMBER

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,580

Applicant(s)

TANAKA, YOSHIAKI

Examiner

Anatoly Vortman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,51,53,55 and 57 is/are rejected.
- 7) ☒ Claim(s) 7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47 and 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/4/03 and 1/25/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: see continuation sheet.

Continuation of Disposition of Claims: Claims withdrawn from consideration are
2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56 and 58.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1 and all odd claims dependent thereon, in the reply filed on 12/20/04 is acknowledged. Because Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). All pending claims, which belong to Group II (even claims) have been withdrawn from further consideration as drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 51, 53, 55, and 57, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA).

Regarding claims 1 and 3, Applicant has disclosed in the "Description of the Prior Art" section of the instant specification (p.2 through 7) that fuses having fuse elements of ternary In-

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Sn-Bi alloys had been known in the fuse art at the time the invention was made. Specifically, the Applicant has pointed out in relation to JP/2001-266724 that fuse element which has an alloy composition of 42 to 53% In, 40 to 46% Sn, and 7 to 12% Bi was known in the fuse art (see p. 4, of the specification, lines 3 and 4). The claimed ranges as recited in claim 1 are overlapping or close to the aforementioned AAPA ranges.

Thus, it would have been obvious to a person of ordinary skill in the fuse art at the time the invention was made to select ranges for ternary In-Sn-Bi alloy as claimed in claim 1, since a prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art. *E.g., In re Geisler*, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (CCPA 1976); *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

Also, a prima facie case of obviousness typically exists when the ranges of a claimed composition do not overlap but close enough such that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985).

Regarding claim 5, the fuse element is inherently contains inevitable impurities.

Regarding claims 51, 53, 55, and 57, AAPA in relation to JP/2001-266724 teaches that fuse element (2) is connected between a pair of lead conductors (1) and sandwiched between insulating films (3) (see Fig. 1, 2 of JP/2001-266724).

Allowable Subject Matter

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4. Claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, and 49, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:
regarding claims 7 and 9, the claims recite: “a portion of each of said lead conductors...is covered with an Sn or Ag film.”;

regarding claims 11, 13, 15, and 17, the claims recite: “conductors have a disk-like shape”;

regarding claims 19 and 21, the claims recite: “metal particles are made of a material selected from the group consisting of Ag, Ag-Pd, Ag-Pt, Au, Ni, and Cu.”;

regarding claims 23, 25, 27, 29, 31, 33, 35, 37, 39, and 41, the claims recite: “a heating element”; and,

regarding claims 43, 45, 47, and 49, the claims recite: “said other face of said insulating plate is covered with an insulating material”.

The aforementioned limitations in combination with all remaining limitations of the respective claims are believed to render the claims patentable over the art of record.

Conclusion

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6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

US/20020113685, 20040100355, 2703352, 4216457, 4367451, 5130689, 6064293, 6556122, and JP/2001-073050 disclosed electrical fuses with alloy fuse elements.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AV



Anatoly Vortman
Primary Examiner
Art Unit 2835